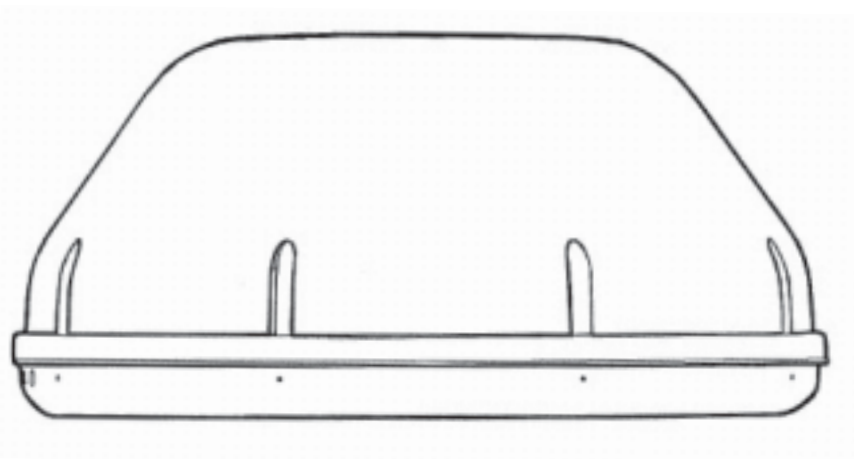
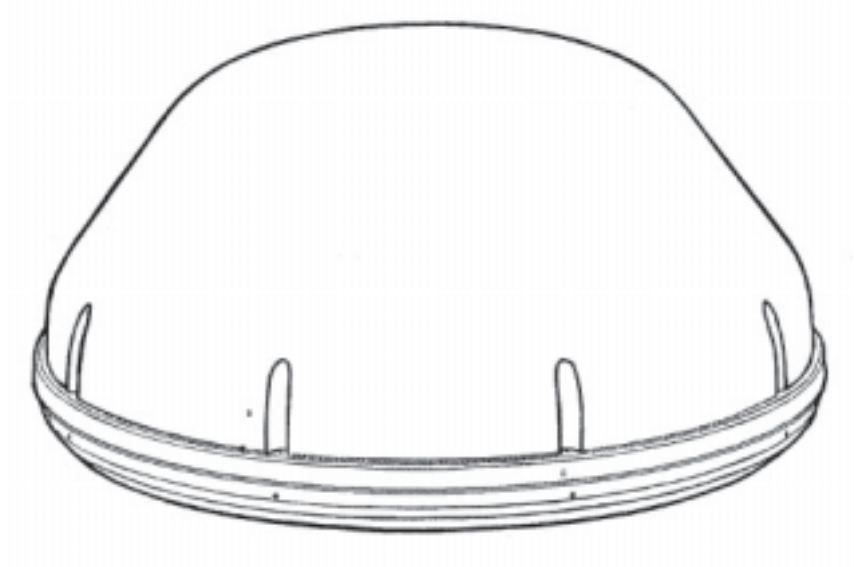


# WINEGARD<sup>Æ</sup>

## Movin' View<sup>™</sup>

**Digital Satellite Mobile Antenna for Single Receiver  
Model MV-0099**

Made in the U.S.A. U.S. Patent Nos. 6,023,247; 6,188,300



# Introduction/How Does Digital Satellite TV Work?

## Introduction

Congratulations! You have purchased one of Winegard's latest developments in the mobile satellite reception product line - the Movin' View™. This system, used with your digital satellite receiver, will deliver the best reception possible using GPS (Global Positioning System) and precision gyroscopes.

## How Does Digital Satellite TV Work?

Satellite programming originates from an uplink facility on Earth - the facility receives many signals from different sources, combines the signals digitally and transmits to the satellites. The satellites (22,300 miles above Earth) receive the uplink signal, amplify it and then transmit it back to earth in the Ku frequency band. This signal is concentrated and reflected to the LNBF\* located at the focal point of the dish. The LNBF amplifies and converts the signal to the 950 to 2050 MHz range. The signal is then passed through a coaxial cable to the receiver where individual channel selection and processing take place.

\* Low Noise Block Converter Feed

For Programming information call:

**DISH NETWORK™ - 1-800-333-DISH (1-800-333-3474)**

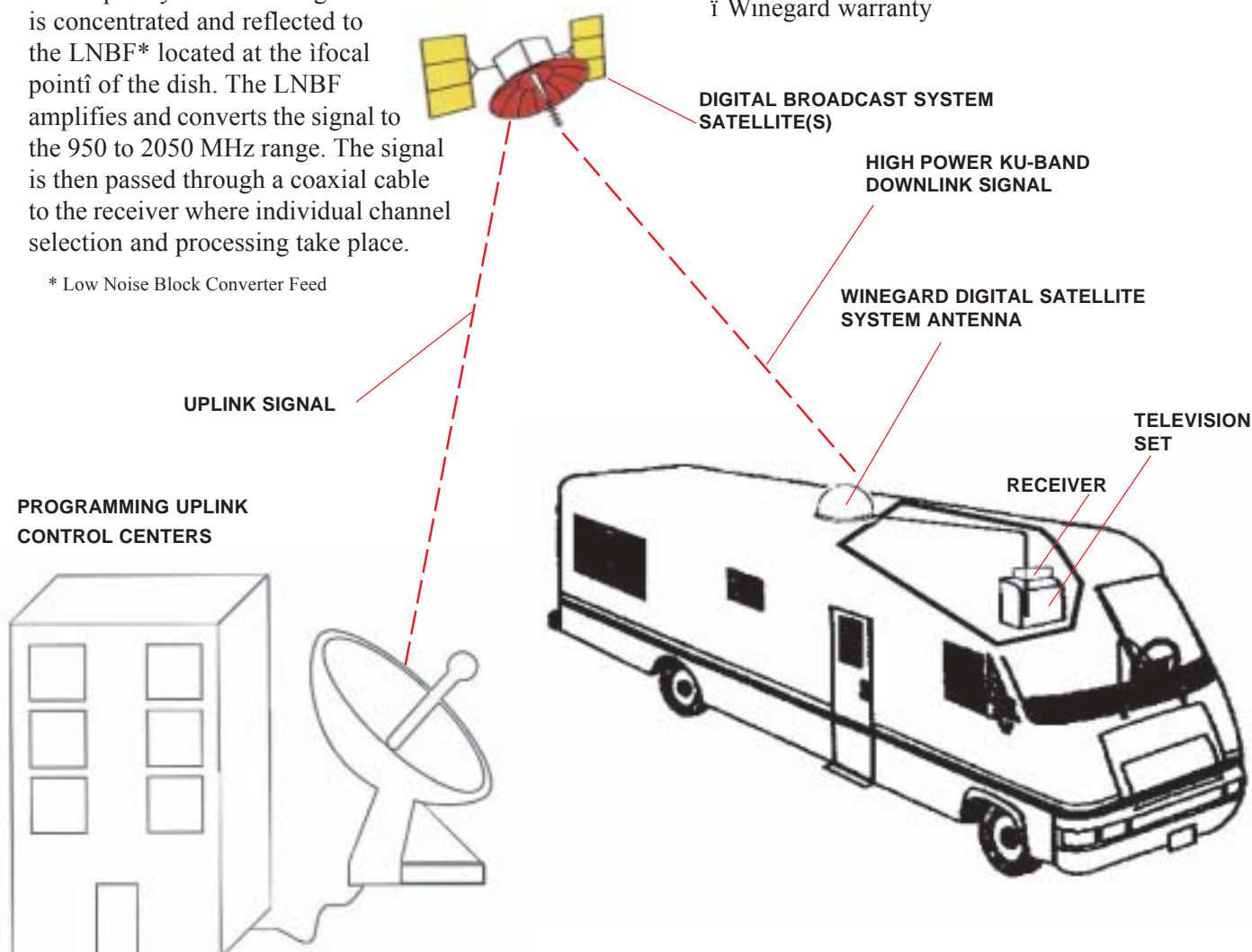
**DIRECTV® - 1-800-DIRECTV (1-800-347-3288)**

**EXPRESSVUE® - 1-888-SKYDISH (1-888-759-3474)**

*Your new Winegard RV Digital Satellite System is an easy-to-use satellite TV reception system. Because it mounts on the top of your recreational vehicle, it goes where you go and provides quality reception of digital satellite signals. Check with your program provider for exact coverage area.*

### MV-0099 features:

- GPS technology
- Easy one-button operation
- Compatible with most digital satellite receivers
- Ability to toggle between satellites using remote control, if subscribing to multisatellite programming
- Winegard warranty



---

## NOTICE!

This model is PRESET for DISH Network™ receivers.

If you have a DIRECTV® or ExpressVu® (Canada) receiver, you must change the numbered switches inside the dome.

### ***TO CHANGE SWITCHES INSIDE DOME —***

1. Remove screws holding dome to base and remove dome. Place dome in safe spot to avoid damage.

Switches will be set at 119∞ for DISH Network. You will be changing these switches.



2. Determine which programming you will be using. This will determine how you set your switches.

For **DIRECTV<sup>®</sup>** set switches to **101∞**.

For **ExpressVu<sup>®</sup>** set switches to **092∞**.



## Operation

1. Turn on receiver and television set. **Unit will not operate unless receiver is on.** Be sure your TV is turned to channel 3 or 4.

2. **Turn +12VDC tracking power switch to ON.**

3. **Allow up to 3 minutes for signal location.** Satellite signal acquisition will occur with normal operating conditions. The signal acquisition time is faster if the vehicle is going in a straight line, or is stopped.

**NOTE: Acquisition time** will be longer if vehicle has traveled more than 600 miles or it has been 6 months without the unit in use. **If you have traveled this distance or 6 months has passed without using the unit, signal acquisition may take up to 10 minutes.**

4. **If you do not have a signal after three minutes,**

be sure there are no obstacles preventing signal acquisition. (Trees, hill, buildings or other structures can block the signal.) Move to an open area so your system can see the satellite signal.

5. **Signal interruption** occurs while traveling when the line of sight to the satellite is blocked. This corrects itself when blockage is cleared. The amount of time it takes your TV picture to recover will be dependent on the receiver model.

6. **If you do not have signal,** see *Troubleshooting*, p. 5.

\* If vehicle does not move for 6 minutes or more, MV-0022 will go to SLEEP MODE. It will remain on the last selected satellite. Moving vehicle will cancel SLEEP MODE and unit will resume tracking mode.

### ***Expected operation of MV-0099—***

**Fine-Tuning Period:** After signal is acquired, the unit will continue to track the satellite signal while the vehicle is moving. If the signal was locked on while the vehicle was stationary, or the vehicle stops moving, the system will continuously fine-tune for approximately 8 minutes. If the vehicle begins moving during this 8 minute period, the system will resume tracking mode.

If the vehicle has not begun moving by the end of this 8 minute period, MV-0099 will move to peak on the alternate satellite, then move back to peak on the primary satellite. This will take 5-20 seconds, depending on the receiver model and software. At this point, the system will

enter sleep mode. To toggle between the primary and alternate satellites when in sleep mode, use the remote control. Moving the vehicle will cancel sleep mode and start tracking mode.

**Recovery From Signal Interruption:** *While traveling, the signal will be interrupted when the line of sight to the satellite is blocked.* Signal is acquired again after line of sight is restored. If signal is interrupted for more than 15 seconds, the system automatically enters the search routine. *The length of time for the TV picture to recover depends on the receiver model you are using.*

### ***To toggle between satellites when subscribing to multi-satellite programming—***

MV-0099 will toggle between satellites. DIRECTV and DISH Network have programming on more than one satellite.

When a channel is selected on the remote control and is not on the satellite currently selected, the unit will automatically move to the correct satellite.

#### **DIRECTV programming**

1. DIRECTV receivers must be set for oval dish 2 sat selection to enable toggling between primary 101°W satellite and alternate 119°W satellite. (Consult receiver manual for procedure.) After receiver is set for the correct dish selection, when you request a channel located on a different satellite, the unit will automatically move to that satellite.

#### **DISH Network programming (DISH 500)**

**If this is the first time the receiver has been used, you may need to download receiver software; best done on a home dish.**

**NOTE: Once these steps are completed, you won't need to perform this test again, unless Check Switch was performed on another satellite dish, such as a home dish.**

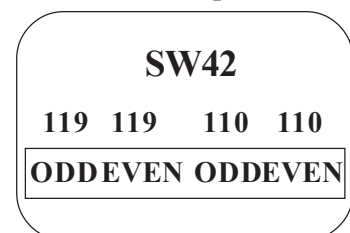
1. While vehicle is stationary, wait for unit to acquire satellite signal on satellite 119.

2. After signal is acquired, the system will continuously fine-tune for 8 minutes. At the end of 8 minutes, it will enter sleep mode. You have 6 minutes to complete Check Switch test. Consult DISH receiver manual.

3. During the Check Switch Test, the receiver will begin checking your switch by toggling between satellites. When this is completed, SW42 will appear on the screen. It will be at the top of the screen, satellite designations will be below, showing odd and even transponders. See illustration.

**NOTE: If a switch other than SW42 appears, or you have an X in one of the boxes below the satellites, repeat Check Switch steps.**

Check Switch  
screen display



4. Your system is now set up to toggle between satellites. It will automatically move to the correct satellite when channel is selected.

## IF YOU DO NOT HAVE A SIGNAL:

1. The signal may be blocked by trees, hills or structures. Pull into an area where no trees or buildings are in the line of sight from unit to the satellites.

2. **Check your +12 VDC power switch.** Make sure it is in the ON position.

3. **Check your connections.** The receiver must be connected to the power and coax connected from receiver to the satellite dish. Check demultiplexer connection.

4. **Check your power supply.** The +12 VDC power supply must be hooked up. Check for +12 VDC on the roof at the connector.

5. Is the rear adjustable base bracket facing the rear of the vehicle? See Figure 1, page 4.

6. Loss of signal may also be caused by snow on roof of vehicle.

NOTE: The power rocker switch must be ON for the next steps. Voltage must be +12 VDC, except at the LNBF, see #2, Figure 9, page 10.

## 6. To check voltage at connections, see Figure 9 on page 10. FOLLOW THE NUMERICAL SEQUENCE ON THE DRAWING AND CHECK VOLTAGE AT:

#1. LNBF voltage. Disconnect the coax cable from the LNBF. Check voltage from the middle wire to the shield. There should be +12 to +19 VDC. **If no voltage is present**, make sure receiver is on and check again for +12 to +19 VDC at ends of gray coax cable.

#2. ãMini-cable connection voltage at Control Box.

#3. Coax cable at Control Box going to DVB box.

#4. Coax cable at DVB box going to Heyco connector.

7. Are the dip switches in the correct position (101, 119 or 092)?

8. If the unit still does not have a signal, power off and power back on.

## PROBLEM

Signal strength screen meter shows some signal strength, but constantly moves up and down, and is never locked on satellite.

Unit continues to move, but never finds any signal.

## SOLUTION

**Check your power voltage.** You may have unfiltered power. You must have a minimum of 12 VDC to power the LNBF. If the LNBF shows no signal strength, the unit will move and operate, but you will not be able to lock onto a signal.

The unit continues to move and the signal strength screen shows that it is finding the satellites, but will never lock onto any satellite. Continues to search.

Be sure the **switches** are set on the correct numbers ó see **page 5, step 5.**

The unit moves around in circles, then points off the front of the coach.

The **GPS** is not acquiring a signal.

The unit moves in circles and does not find the satellite, then begins to make grinding noise.

Power unit **off, then on.**

Check switches to make sure they are set correctly.

## Parts Included • Tools Needed • How to Unpack

### About this manual —

We hope this manual will provide clear instructions to install and operate MV-0099.

Two symbols have been used ó



Indicates caution should be taken!



Indicates suggestions to make processes easier for you.

### PARTS INCLUDED:

- |                               |  |
|-------------------------------|--|
| 1 Radome                      | 1 large yellow spade connector             |
| 1 Power switch                | 2 small red spade connectors               |
| 2 Wall plates (white & brown) | All required screws and washers            |
| 1 Surface mount bracket       | 1 base with electronics, dish, single LNBF |
| 1 Cable entry plate           |  |

### TOOLS NEEDED FOR UNPACKING & INSTALLATION:

- |  |  |
|--|--|
| Level  | 1/2" Open end wrench   |
| Drill w/3/4" bit                             | Sealant (consult RV manufacturer for proper type for your roof material) |
| 1-1/4" hole saw (if mounting switch in wall) |  |
| 5/16" Socket for roof screws                 |  |
| 1/8" Allen wrench                            |  |

### UNPACKING THE UNIT

1. Open box and remove packing material.



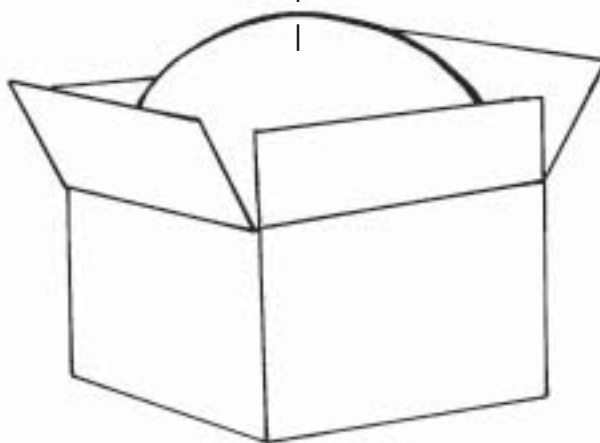
If using knife to open carton, **BE CAREFUL.** Do not cut the dome on the unit.

2. Lift unit out of box vertically. **Do not turn box and roll out, or turn upside down to remove.**



**USE 2 PEOPLE** when removing the unit from the carton.

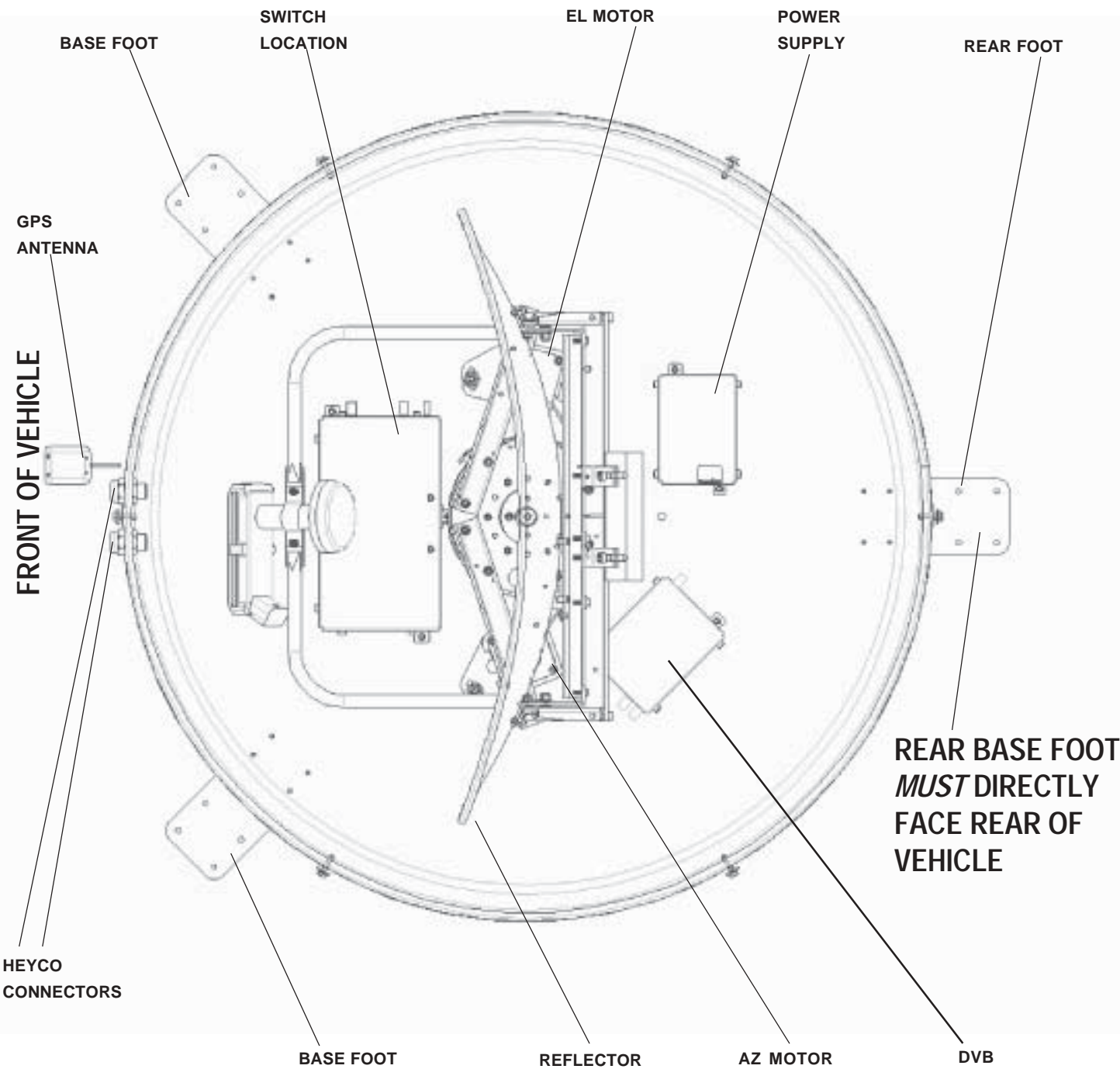
**LIFT UNIT STRAIGHT UP**





# Installation Diagram

FIGURE 1



## Installing unit on roof of vehicle —



Install in DRY conditions only!

**IMPORTANT! Do not install this system in the rain, or under any wet conditions.** Moisture may affect electronics and void your warranty!

1. For best performance and to reduce signal acquisition time, park vehicle on a level surface.
2. Select a level spot on your roof for installation.
  - **The unit should be no more than  $\pm 1^\circ$  off level.**
  - **Be sure any roof-mounted equipment is not blocking the satellite line of sight.**
  - You will need to decide where the wires will enter the vehicle. A coax and an 18 gauge power wire will need to be placed in the vehicle. The power wire will go to the nearest +12 VDC power source; the coax will be routed to your satellite receiver. These wires should be hidden.
3. Remove tie used for shipping.
4. Plug holes created by shipping strap with white rubber plugs in hardware bag.
5. After selecting location for unit (see number 2), put the unit on the centerline of the coach.

**REAR MOUNTING FOOT MUST FACE DIRECTLY OFF REAR OF VEHICLE,** Figure 1, page 7.

5. Place the unit on the roof in its permanent location and mark around the base bracket, Figure 2. (Make sure the **rear adjustable base foot is directly facing the back of the coach.**)

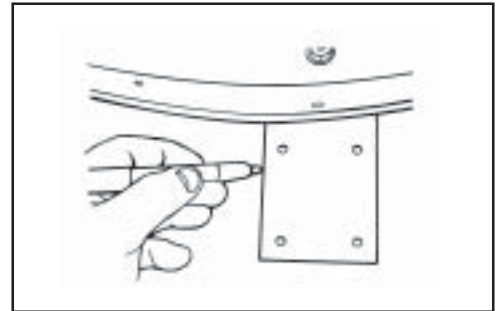


FIGURE 2

6. Clean roof area where the base feet will be attached to the roof. Do not erase your marks!
7. Put approved sealant in the area under the base foot location.
8. After all base brackets are secured to roof, put sealant on top of foot and screws.



# Installation

## GPS installation —

The GPS antenna is pre-wired and has a 1 meter foot cable running through one of the Heyco<sup>®</sup> connectors.

Determine location for GPS antenna. It is recommended you place the GPS antenna 1 meter from dome.

The recommended location for the GPS antenna is based on having a level location and a clear view of the sky for the best satellite signal acquisition.

**IMPORTANT!** The GPS must be located 1 meter away from obstructions on roof of vehicle and other obstructions such as trees, tall buildings, etc. **You must have a clear view of the sky for proper operation.**

## Cable entry installation —

1. Decide the best **location for the cables** to enter the vehicle, *and* the **location of the switch and receiver** (see Installing the switch and receiver on page 10). Drill a 1/2" hole in the roof, push wires inside. Make proper connections.

**You must have filtered +12 VDC power source.**

2. Place cable-entry plate over hole and cables. Screw in place. Seal plate and screw holes with approved sealant (not included).

3. Depending on the length of the cable on the roof, you may need to use cable clamps or wire ties (not provided) between the unit and your cable-entry plate. Clamping the cable every 12"-16" should eliminate any unnecessary cable movement,

Figure 6.

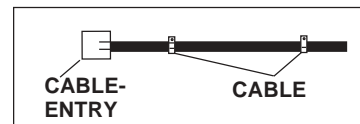


FIGURE 6

## INSTALLING THE POWER SWITCH

1. Decide the location of the power on/off switch. The switch should be close to the +12 VDC power cable coming from the MV-0099. **Be sure the switch is turned off before you begin!** See diagram on next page.

**Wall or panel mount:** Drill 1-1/4" hole, pull wires through wall or panel.

**Surface mount:** Determine location and direction of box. Mount box feed wire into one of the box openings.

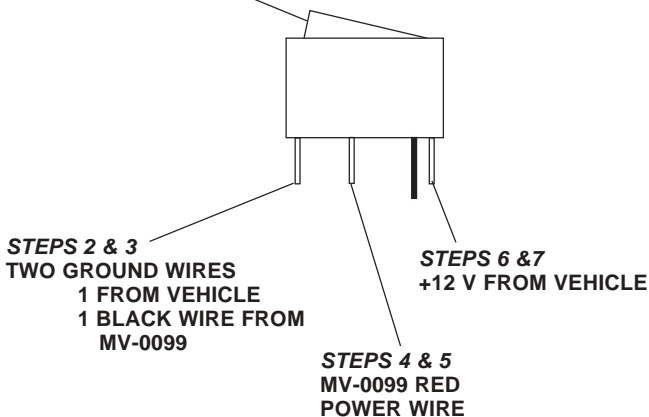
Select plate cover (brown or white provided) and snap the rocker switch into the switch plate. Be sure switch is off!

## INSTALLING THE POWER SWITCH, *cont'd.*

2. Connect the ground wire from the vehicle and the BLACK ground wire from the MV-0099 together, using large yellow spade connector.
3. Connect the YELLOW spade connector to the silver spade on the switch.
4. Connect the RED wire from the MV unit to the small RED spade connector.
5. Connect small RED spade connector to center spade on switch.
6. Connect the +12 V power wire from the vehicle to a small RED spade connector.
7. Connect small RED spade connect to isolated spade on switch.

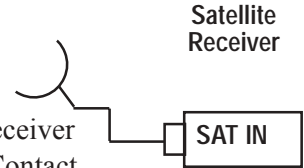
## INSTALLING THE POWER SWITCH DIAGRAM

ON/OFF ROCKER SWITCH  
WITH LIGHT  
(Shown in OFF position.)



## CONNECTING THE RECEIVER —

1. Connect the coax cable from the roof to the iSatellite In connection on the receiver. (A dual receiver upgrade kit is available. Contact Winegard Company for more information.)

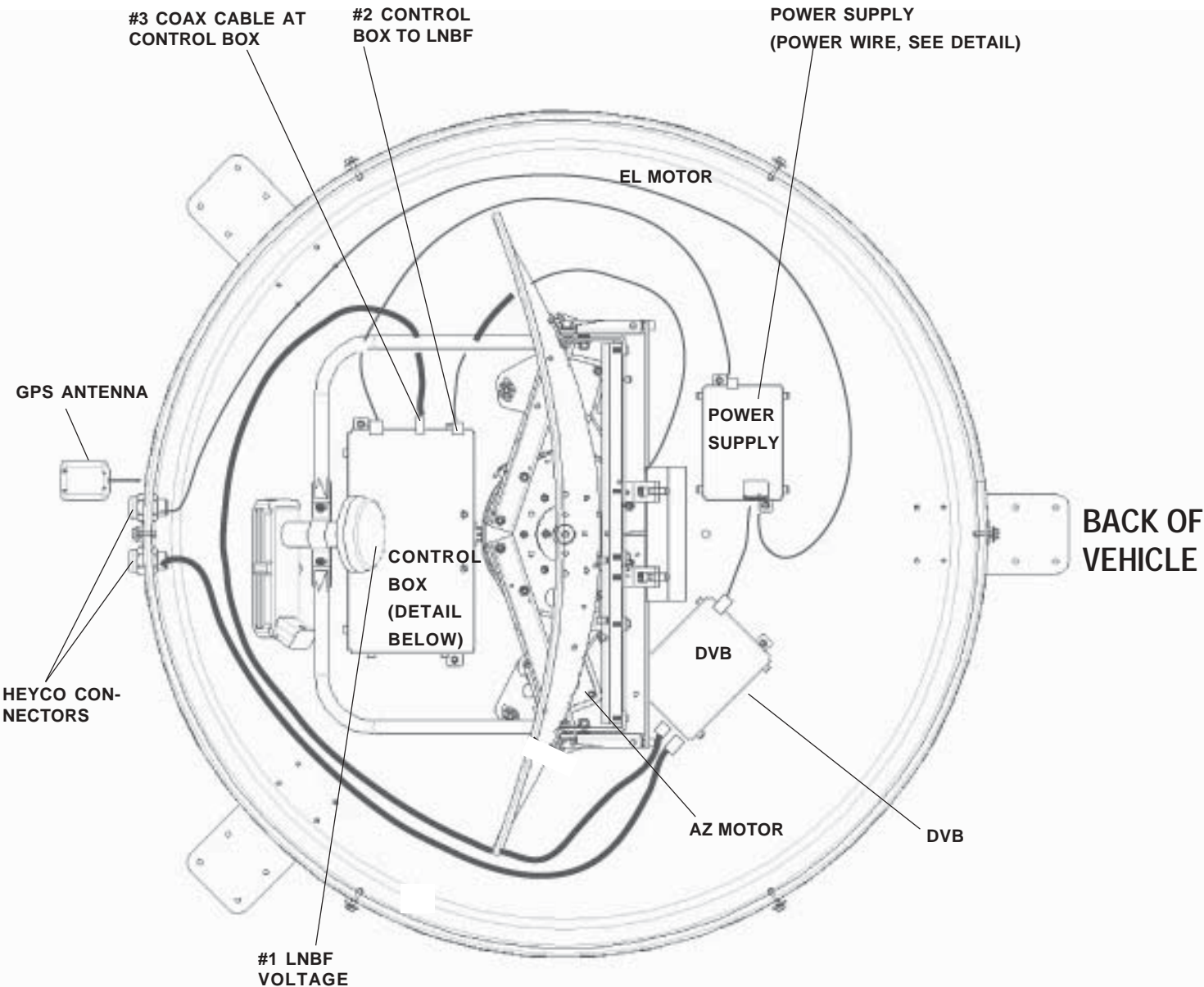


## Initializing —

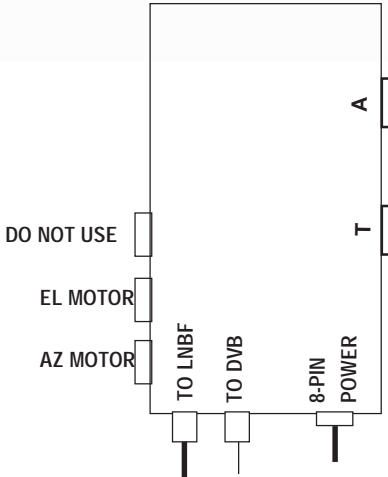
1. Be sure vehicle is in a location free of all obstructions and with a clear view of the satellite.
2. DO NOT MOVE VEHICLE during the first initialization. Power up unit, turn on receiver. FOR THE FIRST TIME ONLY, the unit may take up to 10 minutes to initially find the satellite signal. The GPS is also initializing at this time. After the GPS initializes, the unit will begin searching for the correct satellite.
3. **If the GPS does not initialize at this time**, turn off the unit. You may need to move the GPS antenna to a different location on your roof. After you move the GPS, DO NOT SECURE TO ROOF.
4. **TEST YOUR SYSTEM BEFORE SECURING THE GPS ANTENNA.** Make sure the TV/receiver has found the correct satellite.
5. After the correct satellite has been found, secure GPS antenna by removing adhesive backing and securing to roof.

# Base Diagram

FIGURE 6



CONTROL BOX DETAIL



# Specifications & Warranty

## Features and specifications

- One button operation.
- GPS satellite signal acquisition.
- Depending on receiver type, you can access satellites 119°, 110°, 101° or 92°.
- No user input required.
- No data port required for DISH Network™, DIRECTV® or ExpressVu.
- Tracking greater than 30°/sec.
- Elevation range 14.5° to 74.5°; azimuth unlimited.
- 30' power cable and 30' coaxial cable included.
- Dome UV protected.
- Off-white color compatible with all vehicles.
- Compact size  
32" diameter, 15" height  
Weight of unit - 43 lbs.  
Shipping weight - 59 lbs.
- Operating temperature  
-13°F to +140°F

## TWO YEAR LIMITED WARRANTY

Winegard Company warrants this Winegard product (excluding receiver) against any defects in materials or workmanship within two (2) years from date of purchase. No warranty claim will be honored unless at the time the claim is made, you present proof of purchase to an authorized Winegard dealer (if unknown, please contact Winegard Company, 3000 Kirkwood Street, Burlington, Iowa 52601-2000, telephone 319-754-0600).

Winegard Company (at its option) will either repair or replace the defective product at no charge to you. This warranty covers parts, but does not cover any costs incurred in removal, shipping or reinstallation of the product. This limited warranty does not apply if the product is damaged, deteriorates, malfunctions or fails from: misuse, improper installation, abuse, neglect, accident, tampering, modification of the product as originally manufactured by Winegard, usage not in accordance with product instructions or acts of nature such as damage caused by wind, lightning, ice or corrosive environments such as salt spray and acid rain.

The Two Year Warranty is provided on the condition that the equipment is properly delivered with all handling and freight charges prepaid to your Winegard dealer for repair or return to our factory at the above address. Winegard dealers will arrange for the replacement or repair and return to you, without charge, the product which failed due to defective material or workmanship.

WINEGARD COMPANY WILL NOT ASSUME ANY LIABILITIES FOR ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, MADE BY ANY OTHER PERSON.

ALL OTHER WARRANTIES WHETHER EXPRESS, IMPLIED OR STATUTORY INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY ARE LIMITED TO THE TWO YEAR PERIOD OF THIS WRITTEN WARRANTY.

The foregoing shall be the sole and exclusive remedy of any person whether in contract, tort or otherwise, and Winegard shall not be liable for incidental or consequential damage or commercial loss, or from any other loss or damage except as set forth above.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion of limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

